



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,429	07/29/2003	Kazutoshi Toda	F-7899	7843

28107 7590 01/25/2005
JORDAN AND HAMBURG LLP
122 EAST 42ND STREET
SUITE 4000
NEW YORK, NY 10168

EXAMINER

RODRIGUEZ, PAMELA

ART UNIT PAPER NUMBER

3683

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/630,429

Applicant(s)

TODA ET AL.

Examiner

Pam Rodriguez

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 is/are allowed.
- 6) ☒ Claim(s) 7, 9-12, 15, 16 and 18 is/are rejected.
- 7) ☒ Claim(s) 13, 14 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Amendment filed November 8, 2004 has been received and considered. And in light of the new drawing objections and the new 112 first paragraph rejection of Claim 9 (and correspondingly new Claims 11, 12, and 18) now made in this office action, a second **non-final** office action is presented below.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the subject matter of the "hardness of said inner peripheral corner peripheral region being set **equal to** that of at least said peripheral region of said raceway surface of said inner ring" which appears in the last three lines of Claim 9, the last two lines of Claim 11, the last three lines of Claim 12, and the last three lines of Claim 18 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.. Figure 6, which depicts the hardness relationship between the peripheral regions, appears to show only that the hardness of the inner peripheral corner peripheral region is set LESS THAN that of at least the peripheral region of the raceway surface of the inner ring. The "equal to" relationship is not shown in this or any of the figures.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate

prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 9, 11, 12, and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In the last three lines of Claim 9, the last two lines of Claim 11, the last three lines

of Claim 12, and the last three lines of Claim 18, the phrase "hardness of said inner peripheral corner peripheral region being set equal to or less than that of at least said peripheral region of said raceway surface of said inner ring" is not enabling. While applicant has basis both in his specification and drawings for the "less than" limitation of this phrase, the "equal to" portion is not disclosed in either the specification or the drawings. Figure 6 and page 10 of the specification, which depict and describe the hardness relationship between the peripheral regions, appear to disclose only that the hardness of the inner peripheral corner peripheral region is set LESS THAN that of at least the peripheral region of the raceway surface of the inner ring.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 7, 10, 15, and 16 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. Patent No. 6,398,419 to Kashiwagi et al in view of Bertetti.

The applied Kashiwagi et al reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Regarding Claim 7, Kashiwagi et al disclose a bearing device (see Figure 1) having most all the features of the instant invention including: a shaft body 12 and a

rolling bearing 2 which is mounted around the shaft body 12, wherein the shaft body 12 is provided at its free end with a caulked portion 3, wherein the caulked portion 3 is bent outward in a radial direction for pushing an end face of an inner ring 21 of the rolling bearing 2, thereby preventing the rolling bearing from falling out (see Figure 2), and an end surface of the inner ring 21 constitutes a crimp contact portion in contact with the caulked portion 3 (see Figure 1 and the upper ring 21 and the lower portion of it contacting caulked portion 3, readable as the end surface of inner ring 21).

However, Kashiwagi et al do not disclose that a hardness of a peripheral region of an inner peripheral corner of the inner ring is set to a value capable of plastically absorbing a load at the time of caulking.

Bertetti is relied upon merely for disclosing a bearing device 3 (see Figure 1) having a shaft body 1, a rolling bearing 3 mounted around the shaft body (see Figure 1), and wherein hardness of a peripheral region 36 of an inner peripheral corner of an inner ring 15 is set to a value capable of plastically absorbing a load at the time of manufacture (see column 4 lines 4-10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the peripheral region of the inner ring of Kashiwagi et al to be capable of plastically absorbing a load as taught by Bertetti, at the time of caulking, as the metal in which the inner ring is constructed is always designed to be plastically deformable as outlined in column 4 lines 4-10 of Bertetti, thus, the inner ring would remain deformable during a caulking process as well.

Regarding Claim 10, Kashiwagi et al further disclose that the inner peripheral

corner of the inner ring 21 is roundly chamfered with a predetermined radius of curvature (see Figure 2 of Kashiwagi et al and the lowermost portion of ring 21 nearest radius r2 which appears to be roundly chamfered).

Regarding Claim 15, see Figures 1 and 2 of Kashiwagi et al.

Regarding Claim 16, see column 4 lines 1-10 of Bertetti.

Allowable Subject Matter

8. Claim 8 is allowed.
9. Claims 9, 11, and 12 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
10. Claim 18 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.
11. Claims 13, 14, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

12. Applicant's arguments filed November 8, 2004 have been fully considered but they are not persuasive.

In regards to applicant's arguments directed to the examiner's rejection of Claim 7 using only the Bertetti reference, this rejection has been removed.

However, with respect to the Kashiwagi et al and Bertetti rejection of Claims 7,

10, 15, and 16, the examiner contends that the combination of references teaches applicant's new claim 7, 10, 15, and 16 limitations. In particular, in regards to Claim 7, and the added limitation of an end surface of the inner ring constituting a crimp contact portion in contact with the caulked portion, Figure 1 of the Kashiwagi et al discloses an upper inner ring 21 with the lower portion of it contacting caulked portion 3, this lower portion of the ring 21 being readable as the end surface claimed.

Bertetti is still then being relied upon to teach the limitation of the hardness of a peripheral region of an inner peripheral corner of the inner ring being set to a value capable of plastically absorbing a load at the time of caulking as outlined in the rejection of Claim 7 above (this limitation being disclosed in column 4 lines 1-10 of the reference) and that the inner ring can have a variable hardness as outlined in the rejection of Claim 16 above (this limitation being disclosed in column 4 lines 1-10 of Bertetti).

Thus, the examiner maintains that the above presented rejections are still valid.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pam Rodriguez whose telephone number is 703-308-3657. The examiner can normally be reached on Mondays 5 am -3:30 pm and Tuesdays 5 am -11 am.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Bucci can be reached on 703-308-3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3683

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Pam Rodriguez
Primary Examiner
Art Unit 3683

1/18/05

Pr
01/18/05